MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for February, 1901, is based on reports from about 3,100 stations furnished by employees and voluntary observers, classified as follows: regular stations of the Weather Bureau, 159; West Indian service stations, 13; special river stations, 132; special rainfall stations, 48; voluntary observers of the Weather Bureau, 2,562; Army post hospital reports, 18; United States Life-Saving Service, 9; Southern Pacific Railway Company, 96; Canadian Meteorological Service, 32; Mexican Telegraph Service, 20; Mexican voluntary stations, 7; Mexican Telegraph Company, 3; Costa Rica Service, 7. International simultaneous observations are received from a few stations and used, together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Hawaiian Government Survey, Honolulu; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Mr. Maxwell Hall, Government Meteorologist, Kingston, Jamaica; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; Commander Chapman C. Todd, Hydrographer, United States Navy; H. Pittier, Director of the Physico-Geographic Institute, San Jose, Costa Rica; Captain François S. Chaves, Director of the Meteorological Observatory, Ponta Delgada, St. Michaels, Azores, and W. M. Shaw, Esq., Secretary, Meteorological Office, London.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is 157° 30′ or $10^h\ 30^m$ west of Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local standard is mentioned.

Barometric pressures, whether "station pressures" or "sea-level pressures," are now always reduced to standard gravity, so that they express pressure in a standard system of absolute measures.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

Forecasts of the force and direction of the wind and the state of the weather covering the first three days of the route of steamers from New York and Boston bound for European ports were made daily during the month and printed on the weather maps issued at Boston, New York, Philadelphia, Baltimore, and Washington. On the 5th and 7th special forecasts were issued to the effect that steamers bound west from European ports would encounter severe gales during the second and third days out. During the periods referred to gales of exceptional severity prevailed from mid ocean to the American coast.

The first important storm of the month appeared on the south Pacific coast on the morning of the 1st, whence it passed east-northeast and disappeared off the New England coast during the 4th. Following the passage of this storm freezing temperature occurred in the central valleys of California, and frost was reported as far south as San Diego. In advance of the storm center snow fell generally in the middle-western States and in the middle and eastern districts north of the Ohio River and Maryland. On the Atlantic coast north of Hatteras high winds attended the passage of the storm, with maximum velocities ranging from 50 to 60 miles an hour on the New Jersey and south New England coasts. Attending the area of high barometer which swept southward over the Missouri, Mississippi, and Ohio valleys in the rear of the storm the temperature fell to zero to the southern line of Nebraska on the morning of the 4th, light frost occurred on the middle coast of the Gulf of Mexico on the morning of the 5th, and heavy frost was reported at Jacksonville, Fla., on the morning of the 6th. The frosts of the 2d in California were accurately forecast. Warnings of heavy snow were telegraphed on the 2d to railroad and transportation companies in the region threatened with heavy snow, and additional advices were sent on the 2d and 3d stating that cold weather would follow the passage of the storm. Ample warning was given of the Atlantic coast gales, and of the frosts in the Gulf and South Atlantic States.

The second noteworthy storm of the month crossed the Continent from the 5th to the 9th. This storm appeared over the north California coast on the morning of the 5th, moved thence south of east to the southern Rocky Mountain slope and Texas by the night of the 7th, and from that region drifted eastward and northeastward to the Atlantic coast by the 9th. Heavy rains ended in California during the day and night of the 5th, and heavy snow had fallen in the mountains of central and southern California. With the eastward